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ABSTRACT

One question has dominated the research on televised instruction for many years: how well does it compare to on-campus, face-to-face instruction? The overall results of such studies show that broadcast instruction works; either no difference is found in comparative studies or televised course students are found to have a higher achievement rate than campus-based students. What is important now is for research to begin to distinguish among types of TV courses, factors that increase achievement and completion, and types of students most likely to succeed in TV courses. Two generalizations seem to hold true at present. First, coordinated instructional systems are more effective than simple broadcast courses using uncoordinated components. TV program, textbook, study guide, and exams must all be designed to serve the same instructional objectives. Second, the way the course is offered, the amount and type of support services, is just as important to achievement and completion as the course design. The degree of student involvement and the frequency and type of feedback are particularly crucial. Future research should look at the effect of different video treatments, the attention span and concentration ability of adult viewers, and the content of TV courses. (A 28-item bibliography is appended.) (BB)

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

"TELECOURSE STUDENTS: HOW WELL DO THEY LEARN?"

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by

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When it was suggested that I summarize what is known about the effectiveness of TV instruction, I quickly discovered that it is no small task. As I dug into the many research findings, it became clear that we cannot separate questions about how well the students learn from how do they learn. Therefore, I'll try to briefly review some findings about the effectiveness of TV courses, discuss some implications of these findings, and finally to suggest some questions for future research.

Review of the Research Findings

One question has dominated the research on televised instruction for many years: how well does it compare to on-campus, face-to-face instruction? TV educators have been insecure even though the answer has consistently been that there is either no significant difference or televised instruction is more effective than comparable instruction on-campus. However, it is useful to look at this research in a bit more detail.

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Research on TV instruction has been on-going since the late 40's. There are now literally hundreds of studies on the effectiveness of

ITV. Reid & Maclennan produced a Survey of Research in Instructional TV and Film in 1967 (an HEW study) which was a landmark publication Many of these studies focused on closed circuit television and took place at the elementary and secondary level. Criterion of effectiveness were simply defined as achievement at a comparable level of similar instructional material. But evaluating instructional effectiveness is difficult and studies were hindered by methodological problems. Of the usable studies, the primary finding was on "no significant difference" between televised vs. direct instruction.

Research on the effectiveness of broadcast TV at the college level has produced largely the same conclusions: either "no significant difference" or that the televised course students have a higher achievement rate than campus-based students. In 1960, the third report on the Chicago TV College operations between 1956-1959 concluded: "Courses at the two-year college level can be taught by TV to home audience. Indeed, in the few cases where there were significant differences between performance of home TV students and classroom face-to-face students, the differences were more often in favor of the TV students than the others." The research at Chicago was extensive, sophisticated, and accounted for such variables as students' entering education, sex and age difference, and held the same course objectives for TV and campus courses. The conclusions have been repeated in studies of courses by the Coast Community College District, Dallas County Community College District, UMA and Chicago. We all had to verify for ourselves, and our critics, with different courses, students, and delivery systems. The courses compared have been the core of general education: Political Science, English, History, Geography and Math, as well as Business,

adult education, general interest and vocational courses. A typical study by Dallas of the students taking their "Writing for a Reason" course vs. a similar on-campus course provided these results:

1. Broadcast TV is effective instruction; the overall achievement rate is the same.
2. Some students want more individual help, but many do not.
3. The withdrawal rate was somewhat higher than for on-campus students though "personal problems" was the most commonly given reason for non-completion.
4. Perhaps most important, TV courses attract a population of students which differs from the general -- older, already employed, and unable or unwilling to come to campus for courses.

But even when students were the same, the important thing is that we have compared TV and on-campus courses for many years and the overall results are that broadcast instruction works. TV courses do teach, students are attracted to them, succeed in them, and enjoy them. In fact the effectiveness of TV courses has probably been more intensively studied than most on-campus instructional modes. In other words, I don't think we who design and offer TV courses have to be defensive any longer. What is more important now is to really begin distinguishing between types of courses to explore, what factors increase achievement and completion, and to find what types of students are most likely to succeed in TV courses.

How do broadcast TV courses differ and how do the differences affect student performance? Mechodological problems exist because the major course producers are only now beginning to standardize course design. Furthermore, there are some differences in student viewers in

our broadcast areas, but two generalizations seem to hold true:

1. Coordinated instructional systems are more effective than simple broadcast courses using uncoordinated components.
2. The way the course is offered, the amount and type of support services, are as important as the course design in determining student performance and completion rates.

A. TV Courses as Coordinated Instructional Systems

We have all experienced the cries of outrage from TV students who attempt a TV course where the study guide does not correspond with the text, where the assignment sheet does not assign the right pages of reading, where a person interviewed on the TV gives an opinion that totally contradicts information in the assigned reading, or where the exams are too hard, too easy, or do not reflect objectives. There are many more problems that ever come to our attention. Compensation for badly designed courses on-campus is possible in every class session where a teacher can answer questions, change assignments, or revise exams. But TV courses have to be designed in advance to work well, that means all course components: the TV programs, the textbook, other readings, the study guide, and the exams have to be developed to serve the same instructional objectives and do so in a coordinated manner. To achieve coordinated and designed courses takes specially trained TV and media specialists, academic specialists who know how to write specific objectives and test items, educational writers of study guides that work for at-home students, instructional designers and others all working on a course team for months to produce the components. Describing that complicated process is another speech, but for today, the important point is that in judging TV courses, it's not just whether

the student learned a fact from one TV program, but whether the course components -- print, video, and face-to-face (or phone or audio tapes, etc.) worked together to cause learning.

Thus, many research projects have simply asked students, "What did you think of the course components? How would you rank them in terms of importance and usefulness?" Among the findings:

1. Chicago discovered in the 1956-59 intensive look at TV courses that a study guide and audio visual aids increased instructional effectiveness. The specification of objectives, test banks that fairly and accurately tested objectives, i.e., all course print components, were necessary for courses to retain and satisfy students.
2. The study guide is of crucial importance to students. Not merely a workbook for students to practice writing definitions, the study guide with objectives for each lesson, assignments, discussion of interrelationships, high points, self-study quizzes and more, is designed as the course bible and is used that way. We have found students can pass TV courses with the text and study guide, or the study guide and television, but not without the study guide.
3. The TV programs serve, among other functions, as a pacing device for students. The completion rate of students in closed circuit U.M.A. correspondence TV course was 25-30 percent and raised to 50-60 percent when the same course had a broadcast television component. Aside from what is on the television set, the mere fact of a regular schedule helps discipline student studying.

4. The television programs can serve different functions in a course depending on the design and the subject matter. In a course like Classic Theatre, the performance of plays on TV is the core of the course. In other courses, TV has been an academic specialist presenting information in a condensed version of a classroom demonstration. And there is the model where the television portion entertains and motivates but presents little hard content.

A frequently heard debate is whether TV can serve an entertainment and didactic function at the same time. In one UMA study of the role of TV in three courses (Accounting I, Psychology, and Consumer Experience), students ranked the programs as helpful, but as less important in their studying than other course components. The learners responded positively to the TV programs of courses in which the role of TV is perceived as principally that of presenting material clearly related to explicit objectives. A purely entertainment function for programs received student criticism. Learners seem more satisfied with the TV programs of a course when the programs present material of clear importance in the course, but present it in a manner that is distinctly different from the way the material is covered in other components.

B. How Television Courses Are Offered

These are just a few findings of research looking into how TV courses as coordinated instructional systems affect student achievement. But those of us who design and produce TV courses must also look for other factors that affect student learning -- factors that we don't control -- how are the courses actually offered. As one researcher concluded: "The amount of learning from ITV depends at least as much on what

happens at the receiving end as what does into the program content and structure of the telelessons at the transmitting end." (Smith, p. 23) There is a long list of local support services offered TV students by colleges around the country, from telephone office hours to sophisticated computer prescription feedback systems. Two aspects of these services that deserve attention in how they affect course effectiveness are: the degree of student involvement and the frequency and kind of feedback. Research has tended to show that TV courses work better the more the student can feel involved and receive feedback about how they are doing.

Involvement: Students taking TV courses can become involved in the learning process in many ways because they relate to a person or people on the screen, because they have contact with one person by phone or mail during the course (not necessarily a faculty member), or because they take the course with a friend or spouse, and thus motivate each other. The research provides many surprises here, unexpected ways students become "hooked" into a course. For example, Coast researchers a few years ago found that students who received a post card early in the course asking their opinion of the TV programs were more likely to complete the course than students who weren't included in the post card survey. A Chicago faculty facilitator of the Classic Theatre course offered there told me that because she had appeared on the TV on a brief, locally produced introductory program, students told her that they found it easier to phone asking for advice. It makes me wonder whether we shouldn't send students pictures of local course facilitators in their first letter; it seems important for many TV students to relate to someone, even at a distance.

We shouldn't confuse this need for involvement with a desire for face-to-face discussion or classroom sessions. Study after study tells us that most TV course students do not want more on-campus sessions or anything that decreases their ability to complete the course at home and at their schedule. In some situations, these types of situations may be offered as optional, but to require them would decrease the basic attractiveness of TV courses as being convenient for older, full-time employed students. Relationships and involvement can occur even at a distance.

Feedback: The other important quality of local supportive services is that they provide the student feedback -- not just grades but in terms of course content, even on self-study quizzes. Research on learning consistently shows that the more rapid and specific the feedback, the greater the retention of knowledge. A Coast study showed that students who got performance reports back on individual quiz items did better than students who got only a total grade. However, a third group of students who received a description of what was wrong with their answer and where the right answer could be found, had better end-of-course grades than students in either of the other groups. Fewer students complete courses with just midterms and finals. There is too long a period before they are called upon to become involved and before they get feedback as to whether they are studying enough and studying the right thing.

Thus far, the research on teaching students at a distance through ITV suggests that we have been lucky rather than systematic in

our success with TV learners. The courses have worked even though the coordination of components hasn't always been there and support services not always available. We have a lot to learn about how the mature, adult learner at home can best succeed in TV courses. Unlike the campus classroom situation, we have to accept the students as they are, to compete with other demands for their attention, and without having control over the environment in which they receive the course. Thus, I feel it's very important that we start to judge effectiveness of TV courses not simply by how they compare with on-campus courses (as if that was the ideal standard). Rather, effectiveness can be shown in terms of student performance in relation to course objectives and in terms of student reports of learning, stimulation, and enjoyment.

Last, I'd like to take the opportunity to suggest some questions for future research in instructional television courses.

1. What is the effect on learning of different video treatments? Designers and producers try different techniques to teach different types of knowledge: animation, documentaries, dramatizations, lecture, discussion, etc. Do they work? Can we learn why and when to choose one style over another? More important, can we find out how entertainment and more didatic presentations are related to learning? One student taking the child development course "The Growing Years" observed that there was "too much drama, not enough school." How school-like does TV have to be? CTW has done research on what video styles are most effective with preschoolers--it is clear that we need the same kind of research for the adult learner.

2. There are important questions to ask about the learners: What is the attention span and concentration ability of adult viewers? Are students able to shift to active listening and watching compared to the more passive style they use for other TV programs? Are students who succeed in TV courses able to concentrate more fully? What is retained and for how long? I would like to see more testing of samples of students immediately after programs, after repeats, and after reading plus one viewing to see what patterns and combinations of study are most effective.
3. Last, we need to look at the content of TV courses. Most have tended to duplicate the on-campus college curriculum, but it is time to consider whether that is the best use of TV and is desired by the students. I suspect that we have been timid and traditional in selling objectives, with an emphasis on memorization of primarily factual information. We did this because it seemed more appropriate for the students, most of whom are introductory college level, and because specifying and testing higher level knowledge is much more difficult. But television as a medium of instruction works especially well at showing the complexities of knowledge, and dealing with emotional, value-laden issues, even in introductory level courses. TV can also motivate, stimulate, force questioning, provoke--all the highest goals we have long heard for higher education. We have been often guilty of trying to force the TV into being a presentor of hard data

and it can do that, but often the print medium can do it better.

Now that we know TV works, and have some understanding of how the components interrelate, especially when used with other media, it's time to look more carefully at what we are teaching.

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